

Applicants respectfully request reconsideration and allowance of the present application in view of the above amendment and following remarks.

35 U.S.C. 112, first paragraph:

In regard to the Examiner's rejection of claims 11-19 and 22 under 35 U.S.C. 112, first paragraph, Applicants respectfully disagree with the Examiner. The specification does describe the invention in such a way as to reasonably convey to one skilled in the art that the inventors had possession of the invention at the time the application was filed. First, on page 7, line 33 to page 8, line 1 of the specification, the invention is described generically and it is stated, "A separate RF or microwave ablation probe (not shown) can be used for this purpose (ablation). Alternatively, the mapping array 22 (three dimensional array of electrodes) can itself include one or more ablating electrodes" (Page 7, line 33 to page 8, line 1). Second, in the description of the microconnector 92 on page 17, line 25 to page 21, line 16, the specification states "One or more of the sensing electrodes can also serve as ablation electrodes, as well" (page 18, lines 6-7) and "The control contact 114 can also receive ablation energy through the signal generator 134 from a source 135, to thereby use one or more of the associated sensing electrodes for tissue ablation" (page 18, line 33 to page 19, line 2). Finally, in the description of the deployable bladder mapping assembly on page 28, line 31 to page 30, line 24, the section begins by referring to "the sensing electrodes" (page 28, lines 33-34) and ends with "The circuit attached to signal wires 180 to conduct signals from the conductive zones to a microconnector 92 in the base 172. These signals are in turn transmitted along the length of the associated catheter in the manner already described" (page 30, lines 20-24). By referring to "the sensing electrodes" at the beginning of this section, it is clear that the specification refers generally to the sensing electrodes already described, which can sense electrical events in the tissue and ablate the tissue. Further, by referring to the microconnector 92 and indicating "in the manner described above," this section of the specification clearly incorporates by reference the previous section on the microconnector 92, which states "One or more of the sensing electrodes can also serve as ablation electrodes" and "The control contact 114 can also receive ablation energy through the signal generator 134 from a source 135, to thereby use one or more of the associated sensing electrodes for tissue ablation." Thus, Applicants respectfully submit that claims 11-19 and 22 satisfy 35 U.S.C. 112, first paragraph, and request that this rejection be withdrawn.

35 U.S.C. 102(b):

Stern:

In regard to the rejection of claims 11-22 under 35 U.S.C. 102(b), Applicants respectfully disagree with the Examiner because Stern does not disclose each and every element required by the claims.

In particular, Stern does not disclose, teach or suggest an electrode assembly for sensing and ablating body tissue having an electrode configured to sense electrical events in the body tissue and ablate the body tissue (claims 11-15), an electrically conductive material acting as an individual sensing and ablating electrode (claims 16-17), spaced apart conductive zones configured to sense electrical events in the body tissue and ablate the body tissue (claims 18-19), a body substantially covered by an electrically conductive coating that acts as an individual sensing electrode (claims 20-21), and an electrically conductive coating applied with ion beam assisted deposition (claims 13, 15, 17, 19, 21, 22). Although Stern discloses temperature sensors 24 and 42, these temperature sensors do not sense electrical events in the body tissue and are not electrically conductive material acting as an individual sensing and ablating electrode or as an individual sensing electrode. Further, electrical deposition is not ion beam assisted deposition.

Thus, Applicants respectfully submit that claims 11-22 are not anticipated by Stern and request this rejection be withdrawn.

Perlin:

In regard to the rejection of claims 11, 14, 18 and 20 under 35 U.S.C. 102(b), Applicants respectfully disagree with the Examiner because Perlin does not disclose each and every element required by the claims.

In particular, Perlin does not disclose, teach or suggest an electrode assembly for sensing and ablating body tissue having an electrode configured to sense electrical events in the body tissue and ablate the body tissue (claims 11, 14), spaced apart conductive zones configured to sense electrical events in the body tissue and ablate the body tissue (claim 18), and a body substantially covered by an electrically conductive coating that acts as an individual sensing electrode (claim 20). Perlin discloses a pair of separate EKG electrodes 54 and 56, not an electrode that senses and ablates body

tissue, spaced apart conductive zones configured to sense and ablate body tissue. Further, Perlin discloses a pair of separate electrodes 54 and 56 that act as two separate electrodes, not an electrically conductive coating that acts as an individual sensing electrode.

Thus, Applicants respectfully submit that claims 11, 14, 18 and 20 are not anticipated by Perlin and request this rejection be withdrawn.

35 U.S.C. 103(a):

Stern:

In regard to the rejection of claims 15, 19, 21 and 22 under 35 U.S.C. 103(a), Applicants respectfully disagree with the Examiner since the differences between these claims and the teachings of Perlin would not have been obvious to one of ordinary skill in the art.

In particular, as discussed above, Perlin does not disclose, teach or suggest an electrode assembly for sensing and ablating body tissue having an electrode configured to sense electrical events in the body tissue and ablate the body tissue (claim 11, which claim 15 depends upon), spaced apart conductive zones configured to sense electrical events in the body tissue and ablate the body tissue (claim 18, which claim 19 depends upon), and a body substantially covered by an electrically conductive coating that acts as an individual sensing electrode (claim 20, which claim 21 depends upon).

Further, a conductive material applied to the exterior surface of the electrode assembly by ion beam aided deposition is not obvious over a conductive material of metallic paint or foil. A conductive material applied by ion beam aided deposition adheres significantly better to a base material than metallic paints or foils. This allows the resultant layer to be thinner since no binding materials are required. A conductive coating by ion beam aided deposition has increased flexibility compared to a conductive coating of metallic paint or foil. Ion beam aided deposition is also desirable because it is low-temperature process with excellent quality control. This allows one to achieve good reproducibility, reliability and thickness of deposition control at a high throughput and with no chemical residues. This improved control improves the characteristics of the resulting electric field compared to a metallic paint and foil coating. Also, no chemical residues means that it is both an environmentally and an occupationally safe technique.

Thus, Applicants respectfully submit that claims 15, 19, 21 and 22 are not obvious over Perlin and request this rejection be withdrawn.

Revocation of Power of Attorney

The Examiner is requested to note that Lyon & Lyon are the attorneys of record because a Revocation of Prior Power of Attorney and new Power of Attorney naming Lyon & Lyon was previously filed.

Order of Inventors


The Examiner is respectfully requested to change the order of the inventors so that the first named inventor is David K. Swanson.

CONCLUSION

On the basis of the above amendments, reconsideration and allowance of the application is believed to be warranted and such action is respectfully requested. If the Examiner has any questions or comments regarding this amendment, he is respectfully urged to contact the undersigned at the number listed below.

Respectfully submitted,

LYON & LYON LLP

By:   
Stephen C. Beuerle  
Reg. No. 38,380

Dated: April 29, 1999

633 West Fifth Street, Suite 4700  
Los Angeles, California 90071-2066  
(619) 552-8400